

### Remarks

It is respectfully submitted that entry of a Final Rejection of this application is premature. Applicants' basis for this contention is set forth in the following remarks.

The claims have been replaced to affirm the renumbering of claims set forth in the Office Action mailed May 11, 1999. All claims have been cancelled, and substitute claims are submitted herewith. The substitute claims include all earlier amendments. To avoid confusion, claims have also been substituted for the three claims first cancelled in an earlier amendment. Thus, originally cancelled Claims 10, 11, and 12 are substituted by new Claims 56, 57, and 58, respectively. These latter claims are also cancelled in this same Amendment so that they are no longer present for reexamination.

The substitute claims include the corrections suggested in the last Office Action. As now presented, new Claim 48 employs the term "the drill bit" as required. Claims 47, 67, and 68 recite the term "for allowing tilting" as required.

Reconsideration of the requirement to use section numbers that are exclusively Arabic or Roman numerals is requested. It is respectfully submitted that 37 C.F.R. §1.84(g)(3) indicates that the designation should be Arabic or Roman numerals, *corresponding to the view number of the sectional view*. Applicants' sectional views are identified by Arabic numbers with alphabetic postscripts. Failure to include the alphabetic postscript with the sectional view line would confuse the correspondence between the view line section and the correct sectional view. It is also respectfully submitted that the practice of applying alphabetic postscripts to Arabic numerals for purposes of identifying a cross-sectional view line is commonly employed in U.S. patent practice as exemplified by recently issued U.S. Patent Nos. 5,925,039 and 5,921,774, copies of relevant pages of which are enclosed for the Examiner's convenience. Approval of the drawings

using Arabic numbers with alphabetic postscripts as currently illustrated is respectfully requested.

Claims 47, 48, 50, 52-54, 59, 63, and 64 stand rejected under 35 U.S.C. §102(b) as being anticipated by *Frear et al.* This rejection is respectfully traversed. The Examiner has indicated that Applicants' argument with regard to the *Frear et al.* connecting member is more limited than the scope of Claims 47 and 63. This conclusion is respectfully traversed. Applicant submits that it is abundantly clear that the seals 77 and 45 of the *Frear et al.* teaching are not resiliently deformable for the purpose of tilting members relative to each other *while transmitting torque and weight*. Any weight or torque transmitting function of the seal members is clearly insignificant and immaterial to the operation of the *Frear et al.* device. The *Frear et al.* device is not an equivalent structure to that described and claimed by Applicants. As noted in *In re Donaldson Company, Inc.*, 16 F. 3d 1189, 29 U.S.P.Q. 2d 1845 (Fed. Cir. 1994):

Per our holding, the "broadest reasonable interpretation" that an examiner may give means-plus-function language is that statutorily mandated in paragraph six. Accordingly, the PTO may not disregard the structure disclosed in the specification corresponding to such language when rendering a patentability determination. [29 U.S.P.Q. 2d at 1850.]

As pointed out by the M.P.E.P. at Section 2181, the examiners must interpret the " 'means or step-plus-function' " limitation in a claim as limited to the corresponding structure, materials or acts described in the specification and equivalents thereof." The M.P.E.P. at 2182 further notes that following *Donaldson*, the application of a prior art reference to a means or step-plus-function limitation requires that the prior art element performed be identical to functions specified in the claim.

As argued in Applicants' prior Amendment, the torque and weight-bearing components of the *Frear et al.* assembly are all metal. Applicants' disclosure shows a resiliently deformable connecting member that allows tilting between first and second members *while transmitting torque and weight*. Applicants' Claims 47 and 63 are similarly limited. By contrast, the seals 77 and 45 of the *Frear et al.* teaching are not equivalent in any manner to the resiliently deformable connecting member called for in Applicants' claims.

Applicants have supplemented newly presented Claims 47 and 63 to even more definitely distinguish the claims from the teachings of the *Frear et al.* reference. As now presented, Claims 47 and 63 require that the connecting member be operative to transfer a "major portion" of the transmitted torque and weight. The seals 77 and 45 of *Frear et al.*, while not intended to transfer either weight or torque, are clearly not capable of transferring, even incidentally, the major portion of the torque and weight being transmitted. Reconsideration of the rejection of Applicants' Claims 47 and 63 and claims dependent therefrom is respectfully requested.

The rejection of Applicants' Claim 64 under 35 U.S.C. §102(b) based on *Frear et al.* or *Black* is further traversed. Applicants' Claim 64 recites that the transfer member includes a series of radial teeth on the first member that loosely engage corresponding recesses in the second member, and wherein radial outer surfaces on the teeth and opposed base surfaces of the recesses are configured for allowing tilting of the first member with respect to the second member. It is evident that the *Frear et al.* and *Black* references lack radial teeth, recesses in the second member, and the particular configuration allowing tilting of the first member with respect to the second member.

Rejection of Claim 64 as being anticipated by *Frear et al.* or *Black* is not justified since the references fail to disclose all of the claimed structure. It is established that "a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or

inherently described, in a single prior art reference.” *Verdegaal Brothers Inc. v. Union Oil Company of California*, 2 U.S.P.Q. 2d 1051, 1053 (Fed. Cir. 1987). “The identical invention must be shown in as complete detail as is contained in the . . . claim.” *Richardson V. Suzuki Motor Co. Ltd.*, 9 U.S.P.Q. 2d 1913, 1920 (Fed. Cir. 1989).

Applicants’ Claim 65 has also been rejected under 35 U.S.C. §102(b) as being anticipated by *Black*. This rejection is respectfully traversed for the reasons previously advanced with regard to the rejection of Applicants’ Claim 64, from which Claim 65 depends. Claim 65 cites the additional limitation that the second member is formed with a connecting means for attaching thereto of a drill bit. To the extent that Claim 65 depends from, and thus further limits, Claim 64, it is respectfully submitted that the claim distinguishes over the teachings of the *Black* reference in the manner previously described.

#### **Final Rejection is Premature**

It is respectfully submitted that entry of a final rejection at this juncture in the prosecution of the application is premature. Applicants’ Claim 64 has been rejected for the first time based on the teachings of *Frear et al.* or *Black*. Applicants’ Claim 65 has been rejected for the first time based on the teachings of *Black*. Applicants have had no previous opportunity to respond to the rejection of Applicants’ Claims 64 and 65 based on these references. Application of the new references was not necessitated by any amendment submitted by Applicant. M.P.E.P. §706.07(a) provides an exception for introducing a final rejection on the second Action “where the examiner introduces a new ground of rejection not necessitated by amendment of the application by Applicants, whether or not the prior art is already of record.” It is respectfully submitted that the Examiner has introduced a new ground of rejection of Claims 64 and 65 that

was not necessitated by amendment of the application by Applicants. Withdrawal of the final rejection is respectfully requested.

Applicants' Claims 47, 50, 51, 54, and 62-65 are rejected under 35 U.S.C. §102(b) as being anticipated by *Black*. This rejection is respectfully traversed.

Applicant points out that the *Black* reference lacks a resiliently deformable connecting member that transfers *weight* between the two members of the connection. The Examiner has asserted that Applicants' arguments regarding the connecting member between the first and second members is more limited than the scope of Claims 47 and 63. Reference is again made to the previously cited portions of the *Donaldson* decision requiring that the reference teach equivalent structure. It is respectfully submitted that the structure disclosed in the *Black* reference is not equivalent to that described in Applicants' specification and defined by Applicants' claims. Thus, the *Black* reference shows engagement of weight-bearing members and surfaces 24 and 24a and 25 and 25a that form metal-to-metal engagement. It is not seen that *Black* teaches any resiliently deformable connecting member allowing tilting while transmitting weight between the first and second members. The connector shown in the *Black* reference is not concerned with hole formation as is Applicants' invention; rather, the *Black* design is intended to prevent cracking of the threaded area in the connection. The torque load of the connection is being considered by *Black*. The reference has no equivalency to the apparatus described and claimed by Applicants.

As presently recited, Applicants' Claims 47 and 63 have been supplemented relative to the claims that they replace to even more precisely distinguish the claim language from the teachings of the reference. Thus, as noted previously, Claim 47 recites that the connecting member is operative to transfer a "major portion" of the transmitted weight to the second member. Claim 63 is similarly limited and requires that the resiliently deformable connecting

member is operative to transfer "a major portion" of the transmitted weight to the second member. As previously noted, the *Black* reference does not teach any resilient connecting mechanism for transmitting weight. If the Examiner's conclusion that Applicants' argument regarding the *Black* connecting member is more limited than the scope of Applicants' claim because such reference teaches transfer of weight through the structure corresponding to the pins 27, it is respectfully submitted that the language of Claims 47 and 63 clearly distinguishes over any such structure that may only incidentally carry weight. The lack of equivalency between the referenced structure and Applicants' structure as described and claimed is also reasserted. In view of the foregoing, it is respectfully requested that the rejection of Applicants' Claims 47 and 63, and claims dependent therefrom based on the *Black* teaching, be reconsidered and withdrawn.

Applicants' Claims 47, 48, and 54 stand rejected under 35 U.S.C. §102(b) as being anticipated by *Bodine*. This rejection is respectfully traversed. The resiliently deformable member shown in the *Bodine* patent does not transmit torque and weight from the first member to the second member. The Examiner correctly notes that Applicants have incorrectly referred to the first member of the *Bodine* reference as being plate 18. Applicants appreciate that the first member is in fact the drill collar member and that the second member is the bit 16. The resilient connecting member between the first and second members of *Bodine* is the resilient bushing coupler 22 employed to hold the parts together resiliently for relative motion between the oscillator and the jacket portion 25 and functioning as a mud seal.

Bushing 22 does not transmit torque and weight between the drill collar 11 and the bit 16 as called for in Applicants' Claims 47 and 63. The equivalency of the structure described in Applicants' specification and claimed in Applicants' Claims 47 and 63 is also not found in the *Bodine* reference. Reference is again made to the *Donaldson* case previously cited. While incidental torque and weight transfer may occur between the bit 16 and the drill collar 11, any

such transfer is insignificant and is not part of the operative limits of the invention. Applicants have defined parent Claim 47 to even more clearly define and distinguish the claims from the *Bodine* reference in calling for the connecting member to transfer a major portion of the transmitted torque and weight to the second member. Reconsideration of the rejection of Applicants' Claims 47, 48, and 54 and claims dependent therefrom based on the *Bodine* reference is respectfully requested.

Applicants' Claim 55 has been rejected under 35 U.S.C. §103(a) as being unpatentable under *Frear et al.* This rejection is respectfully traversed. The weight of the *Frear et al.* connection is taken by the nose bearing 35, which may be bronze. Nowhere does the *Frear et al.* reference suggest that the bronze bushing may be replaced with a resilient weight-bearing member. Nowhere does the *Frear et al.* reference suggest that the composition of the bearing 35 may be a hydrogenated nitrile rubber having a shore SA hardness of at least 80. With regard to this latter limitation, it is respectfully submitted that the claimed composition of Applicants' weight-bearing member is not so well known as to be subject to judicial notice. Citation of a reference showing the called-for material or suggesting its use in the combination claimed in Applicants' Claim 55 is required. It is noted in M.P.E.P. §2144.03 that where applicant traverses an assertion that the knowledge is of such notorious character that judicial notice should be taken, the examiner should recite a reference in support of his or her position. Applicant has raised a seasonable challenge constituting a demand for evidence made as soon as practical during the prosecution. In view of the foregoing, reconsideration of the holding that it is obvious to employ Applicants' recited composition in the claimed combination is respectfully requested. Applicants' Claim 55 is also respectfully submitted to be patentable over the art of record and the rejections as previously applied based on its dependency from Claim 54 and the arguments submitted relative to Claim 54 and the parent Claim 47.

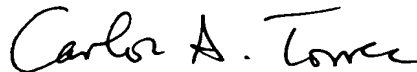
**Entry of Final Rejection is Premature**

It is also respectfully submitted that entry of a final rejection at this point in the prosecution of the application is premature in that Applicants' Claim 55 has been rejected based on a new grounds of rejection not necessitated by any amendment made by Applicants. This is Applicants' first opportunity to respond to a rejection of Claim 55 under 35 U.S.C. §103 based on the teaching of the *Frear et al.* patent. Reconsideration of the rejection of Applicants' Claim 55, and withdrawal of the entry of a final rejection is respectfully requested.

Applicants' Claim 60 stands rejected under 35 U.S.C. §103(a) as being unpatentable under *Frear et al.* in view of Leroy. This rejection is respectfully traversed. As currently presented, Applicants' Claim 60 depends from Claim 59, which in turn depends from independent Claim 47. The claim is therefore distinguished over the *Frear et al.* reference for reasons previously advanced with regard to Claim 47.

In view of the foregoing, it is respectfully submitted that the present application is in condition for allowance, and such action is earnestly solicited.

Respectfully submitted,



Carlos A. Torres  
Reg. No. 24,264

Date: 8-9-99  
Browning Bushman  
5718 Westheimer, Suite 1800  
Houston, Texas 77057  
Tel.: (713) 266-5593  
Fax: (713) 266-5169

**CERTIFICATE OF MAILING**

I hereby certify that this correspondence and all referenced enclosures are being deposited with the United States Postal Service as first class mail in an envelope addressed to: Assistant Commissioner of Patents, Washington, DC 20231 on August 9, 1999.



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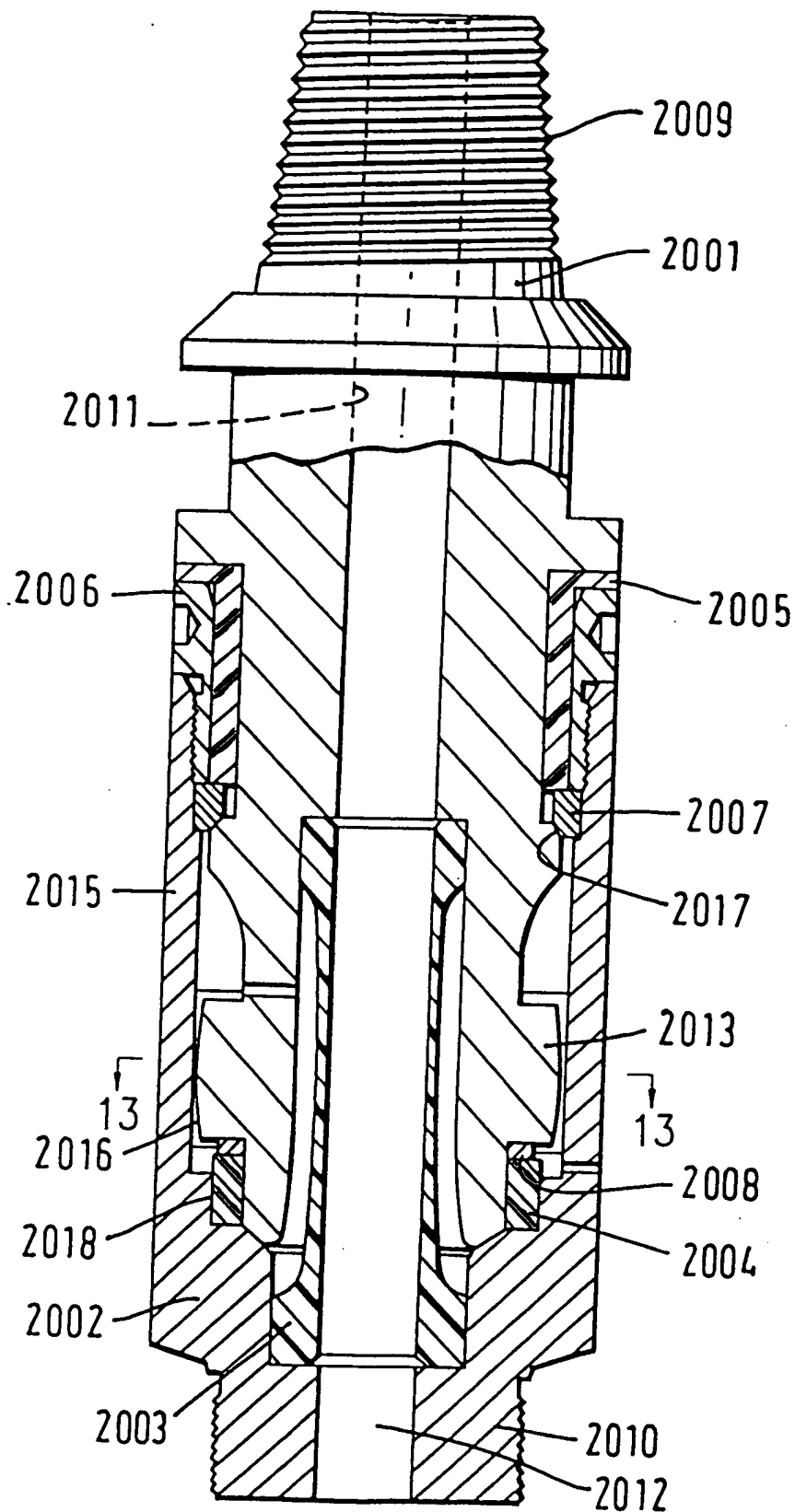


FIG. 12A

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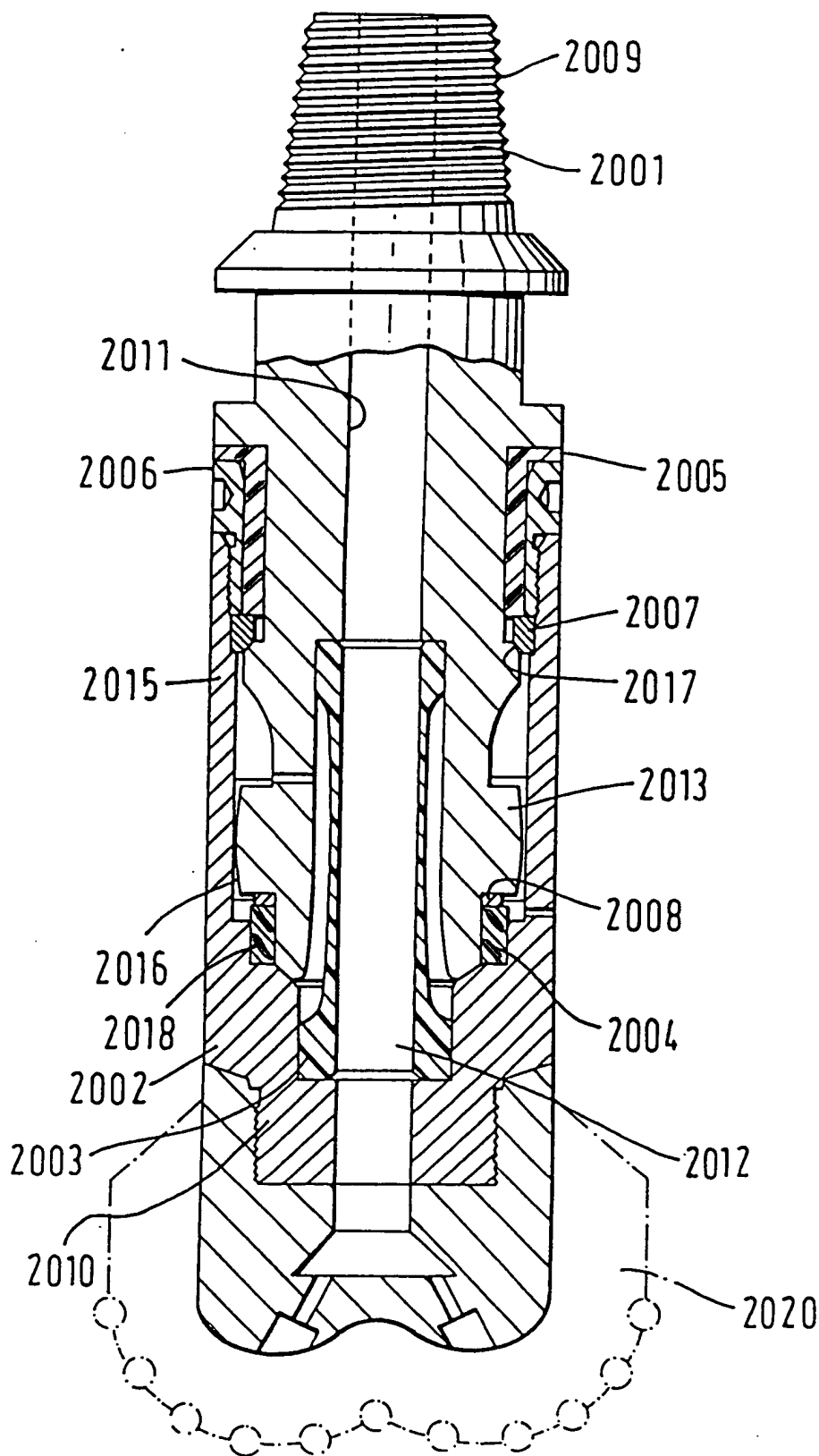


FIG. 12B

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FIG. 12C

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